



06-27-00

644-2756



Attorney's Docket No. RAL9-99-062/4269-74

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Dholakia, et al.

Art Group Unit: 2756

Serial No.: 09/430,697

Filed: October 29, 1999

For: SYSTEMS, METHODS, AND COMPUTER PROGRAM PRODUCTS FOR GENERATING
DIGITAL IMPAIRMENT LEARNING SIGNAL HAVING LOW ENERGY CONTENT AT
DIRECT CURRENT AND NYQUIST FREQUENCIES

June 23, 2000

Director for Patents and Trademarks
Washington, DC 20231

**INFORMATION DISCLOSURE STATEMENT
CITATION UNDER 37 C.F.R. § 1.97**

Sir:

Attached is a list of documents on form PTO-1449 together with a copy of each identified document. It is requested that these documents be considered by the Examiner and officially made of record in accordance with the provisions of 37 C.F.R. § 1.97 and Section 609 of the MPEP.

Applicants note that Items 179 and 180 of the concurrently filed PTO-1449 form were identified as particularly related to the present application. The other items listed in the PTO-1449 form were identified in other modem cases filed by the assignee of the present application. Finally, Applicants note that various standards related to modems are provided at items 171, 182, 183, 172, and 184.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as Priority Mail addressed to: Director for Patents and Trademarks, Washington, DC 20231, on June 23, 2000.

Vickie Diane Prior

Date of Signature: June 23, 2000

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office		Attorney Docket Number RA9-99-062/4269-74	Serial No. 09/430,697
LIST OF DOCUMENTS CITED BY APPLICANT (Use several sheets if necessary)		Applicant: Dholakia, et al.	
		Filing Date : October 29, 1999	Group 2756

U. S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	1	5,835,538	11/10/98	Townshend	375	295	
	2	5,831,561	11/3/98	Cai et al.	341	106	
	3	5,809,075	9/15/98	Townshend	375	254	
	4	5,801,695	9/1/98	Townshend	375	340	
	5	5,793,809	8/11/98	Holmquist	375	242	
	6	5,784,405	7/21/98	Betts et al.	375	222	
	7	5,778,024	7/7/98	McDonough	375	216	
	8	5,768,311	6/16/98	Betts et al.	375	222	
	9	5,761,247	6/2/98	Betts et al.	375	316	
	10	5,757,849	5/26/98	Gelblum et al.	375	222	
	11	5,754,594	5/19/98	Betts et al.	375	285	
	12	5,729,226	3/17/98	Betts et al.	341	94	
	13	5,598,401	1/28/97	Blackwell et al.	379	94	
	14	5,546,395	8/13/96	Sharma et al.	370	84	
	15	5,534,913	7/9/96	Majeti et al.	348	7	
	16	5,528,679	6/18/96	Taarud	379	34	
	17	5,528,625	6/18/96	Ayanoglu et al.	375	222	
	18	5,406,583	4/11/95	Dagdeviren	375	5	
	19	5,394,437	2/28/95	Ayanoglu et al.	375	222	
	20	5,394,110	2/28/95	Mizoguchi	329	304	
	21	5,291,479	3/1/94	Vaziri et al.	370	58.2	
	22	5,253,291	10/12/93	Naseer et al.	379	406	
	23	5,210,755	5/11/93	Nagler et al.	370	108	
	24	5,157,690	10/20/92	Buttle	375	14	
	25	5,134,611	7/28/92	Steinka et al.	370	79	
	26	5,119,403	6/2/92	Krishnan	375	39	
	27	5,119,401	6/2/92	Tsujimoto	375	14	
	28	5,067,125	11/19/91	Tsuchida	370	79	
	29	5,052,000	9/24/91	Wang et al.	371	43	
	30	5,040,190	8/13/91	Smith et al.	375	4	
	31	5,033,062	7/16/91	Morrow et al.	375	7	
	32	5,014,299	5/7/91	Klupt et al.	379	98	
	33	4,995,030	2/19/91	Helf	370	32.1	
	34	4,985,902	1/15/91	Gurcan	375	14	
	35	4,972,360	11/20/90	Cuckier et al.	364	724.04	
	36	4,901,333	2/13/90	Hodgkiss	375	98	
	37	4,890,303	12/26/89	Bader	375	107	
	38	4,884,285	11/28/89	Heynen et al.	375	25	
	39	4,868,863	9/19/89	Hartley et al.	379	98	
	40	4,797,898	1/10/89	Martinez	375	7	

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41	4,760,598	7/26/88	Ferrell	380	44
42	4,720,861	1/19/88	Bertrand	381	36
43	4,578,796	3/25/86	Charalambous et al.	375	8
44	4,577,310	3/18/86	Korsky et al.	370	58
45	4,450,556	5/22/84	Boleda et al.	370	58
46	4,434,322	2/28/84	Ferrell	178	22.13
47	4,270,027	5/26/81	Agrawal et al.	179	81R
48	4,237,552	12/2/80	Aikoh et al.	370	83
49	4,132,242	1/2/79	Carroll, Jr.	137	263
50	4,112,427	9/5/78	Hofer et al.	340	347
51	3,729,717	4/24/73	de Koe et al.	340	172.5
52	3,683,120	8/8/72	Schenkel	179	15A
53	3,557,308	1/19/71	Alexander et al.	178	69.5
54	5,918,204	6/29/99	Tsurumaru	704	214
55	5,914,982	6/22/99	Bjarnason et al.	375	222
56	5,911,115	6/8/99	Nair et al.	455	63
57	5,887,027	3/23/99	Cohen et al.	375	222
58	5,881,102	3/9/99	Samson	375	222
59	5,881,066	3/9/99	Lepitre	371	20.5
60	5,872,817	2/16/99	Wei	375	341
61	5,870,429	2/9/9	Moran, III et al.	375	222
62	5,862,184	1/19/99	Goldstein et al.	375	295
63	5,862,179	1/19/99	Goldstein et al.	375	242
64	5,862,141	1/19/99	Trotter	370	468
65	5,850,421	12/15/98	Misra et al.	375	354
66	5,850,388	12/15/98	Anderson et al.	370	252
67	5,844,940	12/1/98	Goodson et al.	375	222
68	5,838,724	11/17/98	Cole et al.	375	222
69	5,835,532	11/10/98	Strolle et al.	375	233
70	5,825,823	10/20/98	Goldstein et al.	375	286
71	5,825,816	10/20/98	Cole et al.	375	222
72	5,822,371	10/13/98	Goldstein et al.	375	242
73	5,815,534	9/29/98	Glass	375	326
74	5,812,537	9/22/98	Betts et al.	370	286
75	5,805,669	9/8/98	Bingel et al.	379	28
76	5,784,415	7/21/98	Chevillat et al.	375	341
77	5,757,865	5/26/98	Kaku et al.	375	344
78	5,734,663	3/31/98	Eggenberger	371	39.1
79	5,726,765	3/10/98	Yoshida et al.	358	412
80	5,724,393	3/3/98	Dagdeviren	375	296
81	5,710,792	1/20/98	Fukawa et al.	375	229
82	5,694,420	12/2/97	Ohki et al.	375	222
83	5,671,250	9/23/97	Bremer et al.	375	222
84	5,646,958	7/8/97	Tsujimoto	375	233
85	5,634,022	5/27/97	Crouse et al.	395	704
86	5,625,643	4/29/97	Kaku et al.	375	222

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88	5,563,908	10/8/96	Kaku et al.	375	222
89	5,533,048	7/2/96	Dolan	375	222
90	5,519,703	5/21/96	Chauffour et al.	370	84
91	5,513,216	4/30/96	Gadot et al.	375	233
92	5,475,711	12/12/95	Betts et al.	375	240
93	5,434,884	7/18/95	Rushing et al.	375	235
94	5,432,794	7/11/95	Yaguchi	371	5.5
95	5,418,842	5/23/95	Cooper	379	98
96	5,402,445	3/28/95	Matsuura	375	229
97	5,398,303	3/14/95	Tanaka	395	51
98	5,386,438	1/31/95	England	375	121
99	5,351,134	9/27/94	Yaguchi et al.	358	435
100	5,285,474	2/8/94	Chow et al.	375	13
101	5,265,151	11/23/93	Goldstein	379	97
102	5,253,272	10/12/93	Jaeger et al.	375	60
103	5,225,997	7/6/93	Lederer et al.	364	550
104	5,142,552	8/25/92	Tzeng et al.	375	14
105	5,111,481	5/5/92	Chen et al.	375	14
106	5,107,520	4/21/92	Karam et al.	375	60
107	5,065,410	11/21/91	Yoshida et al.	375	98
108	5,007,047	4/9/91	Sridhar et al.	370	32.1
109	5,005,144	4/2/91	Nakajima et al.	364	565
110	4,991,169	2/5/91	Davis et al.	370	77
111	4,953,210	8/28/90	McGlynn et al.	380	48
112	4,943,980	7/24/90	Dobson et al.	375	42
113	4,894,847	1/16/90	Tjahjadi et al.	375	121
114	4,890,316	12/26/89	Walsh et al.	379	98
115	4,833,706	5/23/89	Hughes-Hartogs	379	98
116	4,756,007	7/5/88	Qureshi et al.	375	37
117	4,731,816	3/15/88	Hughes-Hartogs	379	98
118	4,208,630	6/17/80	Martinez	375	7
119	3,622,877	11/23/71	MacDavid et al.	324	73 R
120	5,839,053	11/17/98	Bosch et al.	455	13.1
121	5,068,875	11/26/91	Quintin	375	78
122	5,058,134	10/15/91	Chevillat et al.	375	39
123	5,038,365	8/6/91	Belloc et al.	375	8
124	4,967,413	10/30/90	Otani	371	37.4
125	5,311,578	5/10/94	Bremer et al.	379	97
126	5,317,594	5/31/94	Goldstein	375	8
127	5,926,506	7/20/99	Berthold et al.	375	222
128	5,491,720	2/13/96	Davis et al.	375	222
129	5,353,280	10/4/94	Ungerböck	370	32.1
130	5,852,631	12/22/98	Scott	375	222
131	5,732,104	3/24/98	Brown et al.	375	222
132	5,796,808	8/18/98	Scott et al.	379	93.31

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				Filing Date : October 29, 1999		Group 2756	
133	5,751,796	5/12/98	RSCH et al.	379	93.31		
134	5,187,732	2/16/93	Suzuki	379	5		
135	5,640,387	6/17/97	Takahashi et al.	370	359		
136	5,751,717	5/12/98	Babu et al.	370	466		
137	5,784,377	7/21/98	Baydar et al.	370	463		
138	5,887,027	3/23/99	Cohen et al.	375	222		
139	5,850,388	12/15/98	Anderson et al.	370	252		
140	5,914,982	6/22/99	Bjarnason et al.	375	222		
141	5,726,765	3/10/98	Yoshida et al.	358	412		
142	5,850,421	12/15/98	Misra et al.	375	354		
143	5,729,226	3/17/98	Betts et al.	341	94		
144	5,862,184	1/19/99	Goldstein et al.	375	295		
145	5,911,115	6/8/99	Nair et al.	455	63		
146	5,838,724	11/17/98	Cole et al.	375	222		
147	5,784,415	7/21/98	Chevillat et al.	375	341		
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149	5,386,438	1/31/95	England	375	121		
150	5,881,102	3/9/99	Samson	375	222		
151	5,285,474	2/8/94	Chow et al.	375	13		
152	5,513,216	4/30/96	Gadot et al.	375	233		
153	5,835,532	11/10/98	Strolle et al.	375	233		
154	5,418,842	5/23/95	Cooper	379	98		
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation Yes No
	155	WO 98/37657	8/27/98	PCT	H04L		
	156	WO 96/18261	6/13/96	PCT	H04M	11/00	
	157	0 669 740 A2	12/14/94	Europe	H04L	27/00	
	158	0 659 007 A2	11/8/94	Europe	H04M	11/06	
	159	0 473 116 A2	8/27/91	Europe	H04N	1/00	
	160	2 345 019	3/19/76	France	H04L	27/10	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
	161	Erup, et al., <i>Interpolation in Digital Modems - Part II: Implementation and Performance</i> , <u>IEEE Transactions on Communications</u> , Vol. 41, No. 6, pp. 998-1008 (June 1993) ✓					
	162	Fischer, <i>Signal Mapping for PCM Modems</i> , <u>V-pcm Rapporteur Meeting</u> , Sunriver, Oregon, USA, , 5 pgs. (September 4-12, 1997) ✓					
	163	Gardner, <i>Interpolation in Digital Modems - Part I: Fundamentals</i> , <u>IEEE Transactions on Communications</u> , Vol. 41, No. 3, pp. 501-507 (March 1993) ✓					
	164	Humblet et al., <i>The Information Driveway</i> , <u>IEEE Communications Magazine</u> , pp. 64-68 (December 1996) ✓					
	165	Kalet et al., <i>The Capacity of PCM Voiceband Channels</i> , <u>IEEE International Conference on Communications '93</u> , pp. 507-511 (Geneva, Switzerland, May 23-26, 1993) ✓					
	166	Mueller et al., <i>Timing Recovery in Digital Synchronous Data Receiver</i> , <u>IEEE Transactions on Communications</u> , Vol. Com-24, No. 5, pp. 516-531 (May 1976) ✓					

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167	Okubo et al., <i>Building Block Design of Large Capacity PCM-TDMA Subscriber System and Direct Digital Interface to Digital Exchange</i> , Japan Radio Co., Ltd., pp. 69-73 (Japan)
168	Pahlavan et al., <i>Nonlinear Quantization and the Design of Coded and Uncoded Signal Constellations</i> , <u>IEEE Transactions on Communications</u> , Vol. 39, No. 8, pp. 1207-1215 (August 1991)
169	Proakis, <i>Digital Signaling Over a Channel with Intersymbol Interference</i> , <u>Digital Communications</u> , pgs. 373, 381 (McGraw-Hill Book Company, 1983)
170	Williams et al., <i>Counteracting the Quantisation Noise from PCM Codecs</i> , BT Laboratories, pp. 24-29 (UK)
171	<i>A Digital Modem and Analogue Modem Pair for Use on the Public Switched Telephone Network (PSTN) at Data Signalling Rates of Up to 56 000 Bit/s Downstream and 33 600 Bit/s Upstream</i> , <u>ITU-T V.90</u> (September 1998)
172	<i>Series V: Data Communication Over the Telephone Network; Interfaces and voiceband modems; A modem operating at data signalling rates of up to 33 600 bit/s for use on the general switched telephone network and on leased point-to-point 2-wire telephone type circuits</i> , <u>ITU-T V.34</u> (10/96)
173	Bell, R.A., et al., <i>Automatic Speed Reduction and Switched Network Back-up</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 32, No. 1, pp. 154-157 (June 1989)
174	Abbate, J.C., et al., <i>Variable-Data Transmission Modem</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 17, No. 11, pp. 3301-3302 (April 1975)
175	<i>Data Communication Over the Telephone Network; Procedures for Starting Sessions of Data Transmission Over the General Switched Telephone Network</i> , <u>ITU-T V.8</u> (09/94)
176	<i>Line Quality Monitoring Method</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 18, No. 8, pp. 2726-2726 (January 1976)
177	<i>Loopback Tests for V.54 Data Communication Equipment</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 32, No. 3A, pp. 295-299 (August 1989)
178	<i>On-Line Real Time Modem Testing</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 20, No. 6, pp. 2252-2254 (November 1977)
179	Pierobon, Gianfranco L., <i>Codes of Zero Spectral Density at Zero Frequency</i> , <u>IEEE Transactions on Information Theory</u> , Vol. IT-30, No. 2, pp. 435-439 (March, 1984)
180	Marcus, Brian H, et al., <i>On Codes with Spectral Nulls at Rational Submultiples of the Symbol Frequency</i> , <u>IEEE Transactions on Information Theory</u> , Vol. IT-33, No. 4, pp. 557-568 (July 1987)
181	Fischer, Robert, et al., <i>Signal Mapping for PCM Modems</i> , <u>ITU-Telecommunications Standardization Sector PCM '97-120, V.pcm Rapporteur Meeting</u> , (Sunriver, Oregon; September 4-12, 1997)
182	<i>Pulse Code Modulation (PCM) of Voice Frequencies</i> , <u>ITU-T, Recommendation G.711</u> (Geneva, 1972)
183	<i>Series G: Digital Transmission Systems; Terminal equipments - Coding of analogue signals by pulse code modulation; Pulse code modulation (PCM) of voice frequencies</i> , <u>ITU-T, Recommendation G.711</u> (Geneva, 1996)
184	<i>Data Communication Over the Telephone Network; Error-Correcting Procedures for DCEs Using Asynchronous-to-Synchronous Conversion</i> , <u>ITU-T V.42</u> (03/93)
185	<i>Improvement to Spectral Shaping Technique</i> , <u>Research Disclosure</u> , V. 41, n415,415111, pp. 1550-1551 (November 1998)
186	<i>TIA Standard Draft: North American Telephone Network Transmission Model for Evaluating Analog Client to Digitally Connected Server Modems</i> , Telecommunications Industry Association, PN3857, Draft 10 (February 1999)
187	Davis, Gordon T., <i>DSP and MATLAB implementation of model-based constellation generation</i> (September 18, 1998)
188	Woodruff, K.R, et al., <i>Automatic and Adaptive System and Efficient Communication in Noisy Communication Line Environments</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 24, No. 9, pp. 4627-4629 (February 1982)

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190	Borgnis-Desbordes, P., et al., <i>Variable-Speed Data Transmission</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 27, No. 4A, pp. 2269-2270 (September 1984)
191	Couland, G., et al., <i>Analog Wrap Self-Test in Modems During Retrain Operations</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 28, No. 6, pg. 2457 (November 1985)
192	Maddens, F., <i>Sixteen-State Forward Convolutional Encoder</i> , <u>IBM Technical Disclosure Bulletin</u> , vol. 28, No. 6, pp. 2466-2468 (November 1985)
193	<i>Remote Modem-Type Self-Learning</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 28, No. 6, pp. 2398-2399 (November 1985)
194	Maddens, F., <i>Sixteen-State Feedback Convolutional Encoder</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 28, No. 10, pp. 4212-4213 (March 1986)
195	Bell, R. A., et al., <i>Automatic Speed Reduction and Switched Network Back-up</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 32, No. 1, pp. 154-157 (June 1989)
196	Nobakht, R.A., <i>Trellis-Coded Modulation Coding Scheme for a 19/2 Kbps Modem</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 36, No. 11, pp. 167-170 (November 1993)
197	Nobakht, R.A., <i>Unified Table Based Subset Decoder for the Viterbi Algorithm</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 37, No. 09, pp. 581-587 (September 1994)
198	Nobakht, R.A., <i>Trellis Subset Decoder Algorithm Based on a Pattern Recognition Scheme</i> , <u>IBM Technical Disclosure Bulletin</u> , Vol. 37, No. 10, pp. 693-697 (October 1994)
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201	Dialog Abstract, <i>Sample rate converter for duplex modem</i> , European Patent No. 285413
202	Dialog Abstract, <i>Two-speed full-duplex modem for telephone network</i> , PCT No. WO 8501407
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